

15 AUG 2018



I am writing to respond to your official information request dated 1 August 2018 for the following:

"a copy of the proposal from Housing New Zealand to MBIE (late 2012, September) to organise the HNZ foundation trials. I understand the proposal was written in September 2012, authored by amongst others, Malcolm Jones"

In response, I am attaching a paper entitled "Project Plan for Collaborative Foundation Repair Pilot Programme" dated 26 October 2012. This document is marked 'draft'. However, I have been advised that the pilot proceeded as described in this document.

If you have any questions about this response, we will be happy to help. Please contact the Government Relations team at hnzc.correspondence@hnzc.co.nz.

Yours sincerely

A handwritten signature in cursive script that reads "Rachel Kelly".

Rachel Kelly
Manager, Government Relations

Project Plan for Collaborative Foundation Repair Pilot Programme

Principal Parties

Housing New Zealand Corporation (HNZC)
Southern Response Earthquake Services (SRES)

Third Parties

Arrow International (Arrow)
Geotechnical Engineers representing both HNZ and SR/Al
Structural Engineers representing both HNZ and SRES/Al
Design Consultant
Re-levelling Contractors
Building Contractors

Advisors and Observer's

Engineering Advisory Group (EAG)
Local Building Consenting Authorities (BCA's) [CCC, WDC,
SDC]
Canterbury Earthquake Recovery Authority (CERA)

OVERVIEW:

The purpose of this document is to outline the steps involved in the Collaborative Foundation Repair Pilot programme between Housing New Zealand and Southern Response / Arrow International to run a trial project assessing the viability of repairing foundations. HNZC has a large quantity of relatively standard house types, so testing different techniques on similar types of houses is likely to provide valuable information on the viability of various methods.

We are committed to making this process as clear as possible to ensure all are fully informed and the process runs efficiently to provide viable foundation repair solutions.

There will be two pilot programmes running together for both TC2 and TC3 land zones. Both the TC2 and TC3 programmes will have the same tests carried out in each programme.

The Government has shown its support to this pilot programme following announcements by two Ministers during this past two weeks outlining the fact that two Crown entities are working together at the coal face with key players within the industry to find suitably viable foundation repairs to TC2 & TC3 land zone properties.

OBJECTIVES;

- a. Suitable properties are being offered for foundation repair or replacement using an agreed methodology that can be supported with engineering logic, science and details that offer confidence to all parties plus the Consenting Authorities as acceptable economically viable foundation repair methodologies. The trialling techniques such as re-levelling using Urethane, low mobility grout (LMG) screw piles and mechanical jacking will be used by recognised specialists in their field.
- b. All parties involved in this programme are committed to working together collaboratively and supporting the desire to find acceptable foundation repair solutions which can be used by the greater community.
- c. All parties participating in this programme agree to be mindful of costs and to use all resources efficiently within the agreed time frames.

PRINCIPAL PARTY COMMITMENT;

HNZC to provide;

- a. A selection of houses in both TC2 and TC3 land zones with two types of foundation construction: Type B (suspended timber floor with concrete perimeter foundations) and Type C (concrete footing & slab)
 - Single storey light weight cladding and lightweight roofing houses
 - Single storey heavy weight cladding and heavy tile roof houses.
 - Two storey mixed weight cladding and roof houses.
- b. Houses suitable for foundation repairs or partial replacement.
- c. Houses of less than 40 years in age.

- d. Jointly share any IP and information within the project between the joint Principal Parties.
- e. Contractual agreement, engagement, and funding for re-leveling and building contractors to carry out work.
- f. Engagement of own Engineering consultants and to work collaboratively with SRES/AI consultants.
- g. Fund and engage designer for any plans required for building consenting purposes.

SRES to provide;

- a. Split equal funding with HNZN to support AI staff to project manage and coordinate this pilot programme.
- b. Split equal funding with HNZN for Geotechnical and Structural Engineering consultants.
- c. Jointly share any IP and information within the project between the joint Principal Parties.

THIRD PARTY COMMITMENT;

Arrow to provide;

- a. Co-ordination and project management between all parties involved within this pilot project.
- b. Project scoping and costing estimates with consultants and designer.
- c. Provide geotechnical and structural consultants
- d. Provide QS support for cost analysis.
- e. Project management of on site construction activities for this pilot programme. (engagement of on site contractors by HNZN)
- f. H&S on site policy and engagement for all parties.
- g. Liaise with local consenting authorities
- h. Jointly share any IP and information within the project between the joint Principal Parties.
- i. Recording and documentation of testing procedures.
- j. Provide completed reports to Principal Parties. Given approval by the Principal Parties the completed reports will be forwarded to all participating parties.

Geotechnical Engineers to provide;

- a. HNZN will engage Tonkin & Taylor (T&T) as their Geotechnical advisor to all the properties identified in the programme. T&T primary role is to identify whether selected properties have sufficient current data to determine characteristics of the

individual properties. If not a decision will need to be made on whether further site specific information is required.

- b. SRES/Arrow will engage two Geotechnical advisors for;
 - TC3 will be Golder Associates (GA)
 - TC2 will be Geoscience (GS)

Note;

- The three Geotechnical companies will work collaboratively and supportively of each other and in conjunction with the structural engineers to achieve the project objective.
- Site specific testing may need to be carried out by either of the three Geotechnical Co's after joint consultation including the two principal parties. This will incur costs to HNZN.

Structural Engineers to provide;

- a. Arrow will engage on behalf of SRES, two structural engineering companies;
 - Lewis Bradford and Associates to advise and represent both SRES and HNZN on the TC3 programme.
 - Powell Fenwick & Co (to be confirmed) to advise and represent both SRES and HNZN on the TC2 programme.
- b. Both Companies will work collaboratively and supportively with each other and the Geotechnical consultants.
- c. Information and advice is openly shared, received and given between all parties to achieve the project objective.

Design Consultant to provide;

- a. Arrow will assist HNZN on the engagement of a design consultant (yet to be confirmed) to;
- b. Design in consultation with the Structural and Geotechnical Engineers any foundation repairs and or replacement according to desired solution recommended.
- c. To be responsible for the submitting and obtain a Building Consent from the Local BCA.

Note; Building Consent application for the Urethane or LMG re-levelling methodology will be the responsibility of those companies which offer their expertise within this pilot.

Re-levelling Contractors to provide;

- a. Arrow has invited four re-levelling companies to be part of this programme.

- b. HNZN will engage these companies directly for what ever work which has been identified by the Structural and Geotechnical Engineers to be carried out as per the objectives within this project.
- c. Two companies, Re-level and Uretec have been chosen to provide a urethane and or LMG solution for both programmes.
- Both Re-level and Uretec will be responsible for the Building Consent application process.
 - Both companies are required to provide a quote for work intended.
 - All pricing is to be fully disclosed for cost analysis prior to acceptance of work to be carried out.
- d. Piletech and Global Construction Solutions (GCS) have been chosen to provide screw pile solutions for both programmes.
- Both companies to work with the Design Contractor who will be responsible for the Building Consent application process.
 - Both screw pile companies to work in conjunction with and be advised by the Structural Engineers.
 - When working drawing plans are completed both screw pile contractors are required to provide a quote for work intended.
 - All pricing is to be fully disclosed for cost analysis prior to acceptance of work to be carried out.

Building Contractors to provide;

- d. Arrow will assist HNZN in the appointment of suitably qualified building contractors who specialise in foundation repairs and replacements.
- b. HNZN will be responsible for engagement of building contractors.
- c. Building contractors are to contribute their practical building skills in the process of determining a foundation repair or replacement solution.
- d. When working drawing plans are completed the building contractor is required to provide a quote for work intended.
- e. All pricing is to be fully disclosed for cost analysis prior to acceptance of work to be carried out.

ADVISORS AND OBSERVER'S;

Engineering Advisory Group (including BRANZ) to provide;

- a. Responsible for self funding.
- b. Technical overview and observation of how the Building & Housing guidance assessment provisions and repair solutions are being implemented.
- c. Format procedures for testing processes.
- d. Jointly share any IP and information within the project between the joint Principal Parties.
- e. Liaise and assist local Building Consenting Authorities with the engineering principles and processes engaged within the pilot programme.
- f. Disseminate any EAG approved new repair methodologies developed within the project (or modifications to existing methodologies) as part of future guidance updates.

Building Consenting Authority (including CCC, SDC, WDC)

- a. Participate in the pre-design phase of the programme so there is clear understanding of the proposed repair and replacement methodologies.
- b. Assist and advise to ensure a speedy consenting process.

Canterbury Earthquake Recovery Authority (CERA)

- a. Is welcome to all and any project meetings and site visits undertaken throughout the programme.
- b. Is welcome to participate and contribute throughout the programme.
- c. Once the trial programme is completed and reports finalised the use of such information will be available to all parties.

TIME FRAMES;

It is the desire of all Principal Parties to have this pilot programme concluded as quickly as possible. Arrow will prepare and be responsible for a time frame work programme to ensure all parties and facets of the project are continuing without unnecessary delays.

All third party participants agree to cooperate and give urgency of their time and participation to ensure the project is progressing to the time frames estimated.

COSTS;

Arrow will be responsible on behalf of both HNZN and SRES to gather all costing estimates for the project and to obtain approval prior to engagement of contractors by either HNZN or SRES.

When third party contractors are submitting their cost estimates for analysis or acceptance they agree to provide full break down schedules of their estimates. This information will only be available to the Principal Parties and will not be disclosed to any other party without the full and written approval of the contracting party involved.

CONFIDENTIALITY;

All parties in this project should acknowledge and recognise the commercial and sensitivity of information and data which will become available to various parties. All parties are to show respect to each other for information which could be sensitive or confidential to one party over another party.

All outcomes of the testing programme are to remain confidential until they are released by all of the Principal Parties. All participating parties will be advised first before any public announcements.

CONCLUSION;

This significant pilot project has the opportunity for key players involved in the Christchurch earthquake recovery programme to come together and share resources to test and resolve the unknowns in regards to repairing foundations on difficult land zone areas such as TC2 and TC3.

To all selected parties it is an opportunity we can collectively work together in an organised test programme whereby the results can help us all achieve satisfying results that will help damaged properties be economically and viably repaired.

Prepared by;
Matt Tupa
Technical Manager
Arrow International
26 October 2012

